Application Number		10828934		
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First Named Inventor	Gorer	nstein		
Art Unit		1639		
Examiner Name	Steele, Amber D.			
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	1	5270163		1993-12-14	GOLD, et al.			
	2	5475096		1995-12-12	GOLD, et al.			
	3	5582981		1996-12-10	TOOLE, et al.			
	4	5639603		1997-06-17	DOWER, et al.			
	5	5668265		1997-09-16	NADEAU, et al.			
	6	5670637		1997-09-23	GOLD, et al.			
	7	5696249		1997-12-09	GOLD, et al.			
	8	5756291		1998-05-26	GRIFFIN, et al.			

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Art Unit			1639	
	Examiner Name	Steek	e, Amber D.	
Attorney Docket Number		er	UTMB:1022	

	9	5801154		1998-09-01	BARACCHINI, et al.	
	10	5844106		1998-12-01	SEELA, et al.	
	11	6171792	B2	2001-01-09	BRENT, et al.	
	12	9180348	B1	2001-01-30	ш	
	13	6369208	B1	2002-04-09	COLE, et al.	
	14	6514948	B1	2003-02-04	RAZ, et al.	
	15	6610504	B1	2003-08-26	YUAN	
	16	9716629	B2	2004-04-06	PAGRATIS, et al.	
	17	6867289	B1	2005-03-15	GORENSTEIN, et al.	
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	First Named Inventor	Gorenstein		
	Art Unit		1639	
	Examiner Name	Steek	e, Amber D.	
	Attorney Docket Number		UTMR-1022	

	1	20010014461	A1	2001-08	⊱16	HUTCHENS, 6	et al.			
	2	20010014479	A1	2001-08	1-16	HUTCHENS, 6	stal.			
	3	20010034330	A1	2001-10	1-25	KENSIL				
	4	20030133229	A1	2003-07	-31	KLINMAN, et a	al.			
	5	20030162190	A1	2003-08	1-28	GORENSTEIN	l, etal.			
	6	20030162216	A1	2003-08	1-28	GOLD, et al.				
	7	20030186906	A1	2003-10-02		SCHLINGENS	IEPEN, et al.			
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	1	94/01550	wo		A1	1994-01-20	AGRAWAL, et al.			
	2	0 855 184	EP		A1	1998-07-29	LIPFORD, et al.			

Application Number		10828934	
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Art Unit		1639	
Examiner Name	Steele, Amber D.		
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			All	brney Doc	xet Number	UTMB.1022					
	3	99/54506	wo	A1	1999-10-28	u					
	4	00/24404	wo	A1	2000-05-04	GORENSTEIN, et al.					
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	1	AMARZGUIOUI, M., et a in a siRNA	AMARZGUIOUI, M., et al., Nuc Acids Res, 31, 589-595, (2003) – Tolerance for mutations and chemical modifications as a siRNA								
	2	ANDRECIA, M., et al., "Towards the Selection of Phosphorofibiosite Aplanners: Optimizing in Vitro Selection Steps with Phosphorothiosite Nucleotides," European Journal of Biochemistry 267-5032-5040									
	3	BRAASCH, D.A., et al., Nucleic Acids Res. 30(23), 5160-7 (2002) -Antisense inhibition of gene expression in cells by oligonucleotides incorporating locked nucleic acids: effect of mRNA target sequence and chimera design									
	4	BRAASCH, D.A. AND D.R. COREY, Bochemistry, 41, 4503-4519 (2002) - Novel antisense and peptide nucleic acid strategies for controlling gene expression									
	5	CAPILEN, N.J., et al., PNAS, 98, 9742-9747 (2001) – Specific mitabilition of gene expression by small doubte-stranded RNAs in invertibrate and vertibrate systems.									
	6	CASSIDAY, L., et al., "In (2001), 40:2433-3438	ı Vivo Recogni	tion of an R	tNA Aptamer by	its Transcription Factor Tar	get," Biochemistry				
	7	CHI, J.T., PNAS,100(11)), 6343-6 (200	3) - Genom	ewide view of ge	ne silencing by small interfe	ering RNAs.				

Application Number		10828934	
Filing Date		2004-04-21	
First Named Inventor	Gorenstein		
Art Unit		1639	
Examiner Name	Steek	e, Amber D.	
Attorney Docket Number		UTMB:1022	

8	DOUCE I II., et al., Protoomics (2001), 1:387-1000, investigation of the Applicability of a Sequential Digestion Protocol Using Trypian and Leucine Annonopeptidase M for Protein Identification by Malmx-Assisted Laser Desorption/Tonization- Time of Flight Mass Spectrometry	
9	ELBASHIR, et al., "RNA Interference is Mediated by 21- and 22- nucleotide RNAs," Genes and Development (2001), 15.188-200	
10	ELBASHIR, et al., "Functional Anatomy of aRNAs for Mediating Efficient RNAi in Drosophilia melanogaster Embryo Lysale," EMBO Journal (2001), 20:8877-6888	
11	ELGEMEIE, "Thioguanine, Mercaptoputine: Ther Analogs and Nucleosides as antimetabolites," Current Pharmaceutoal Design (2003), 9:2627-2642	
12	FIRE, et al., Nature, 391, 906 (1999) – Potent and specific genetic interference by dsRNA in C.e legans	
13	GITLIN, L., et al., Nature, 418, 430-434 (2002) – Short interfering RNA confers intracellular antiviral immunity in human cells.	
14	HU, W., et al., Curr Biol, 12, 1301-1311 (2002) – Inhibition of retrovinal pathogenesis by RNA interference.	
15	JACKSON, A.L., et al., Nat Biotech, 21(6), 635-637 (2003) — Expression profiling reveals off-target gene regulation by RNAI.	
16	JACQUE, J.M., et al., Nature, 418, 435-438 (2002) – Modulation of HIV-1 replication by RNA interference.	
17	JANSEN, B. AND U. ZANGEMEISTER-WITTE, Lancet Oncol, 3, 672-683 (2002) – Antisense therapy for cancer—the time of truth.	
18	KANAORI, et al., "Effect of Phosphorothicate Chirally on i-Molif Structure and Stability." Biochemistry (2004), 43:5972-5679	

Application Number		10828934	
Filing Date		2004-04-21	
First Named Inventor	Gorenstein		
Art Unit		1639	
Examiner Name	Steele, Amber D.		
AU D. I - N. I		UTMP-4022	

19	KAWASAKI, H., et al (Taira), Nuc Acide Res, 31(3), 981-987 (2003) – siRNAs generated by recombinant human Dicer include specific and significant but target site independent gene silencing in human cells.	
20	KING, D. et al., "Combinational Selection and Binding of Phosphorothioste Aptamers Targeting Human NF-kappa B RelA (p65) and p50," Biochemistry (2002), 41:9696-9706	
21	KING, D.J., "Selection, Binding and Design of Phosphorothioate Duplex Aplamers for the Transcription Factors NF-IL6 and NP-KB," dissertation August 2001	
22	KOLLER, E., et al., Trends Pharm Sci, 21, 142-148 – Eluxidating cell signaling mechanisms using antisense technology.	
23	LESCAR, J., et al., Cell 105(1), 137-48. (2001) - The fusion glycoprotein shell of Semiliti Forest virus: an icosahedral assembly primed for fusogenic activation at endosomal pH.	
24	MCCAFFREY, A.P., et al., Nat Biotechnol, 21(6), 639-44 (2003) - Inhibition of hepatitis B virus in mice by RNA interference	
25	MILLER, V.M., et al., PNAS, 100(12), 7195-200 - Altele-specific silencing of dominant disease genes	
26	NOVINA, C.D., et al., Nat Med, 8, 881-886 (2002) – siRNA-directed substion of HfV-1 infection	
27	OPALINSKA, et al., Nature Reviews (2002), 1:503-514., Nucleo-Acid Therapeutics: Basic Principles and Recent Applications	
28	PARRISH, S., et al (Fire research group), Mol Cell, 6, 1077-87 (2001) – Functional anatomy of a dsRNA trigger differential requirement for the two trigger strands in RNA interference.	
29	PLETNEY, S.V., et al., Cell 105(1), 122-36 (2001) - Locations of carbohydrate sites on alphavirus glycoproteins show that E1 forms an oceahedral scatfold.	

Application Number		10828934	
Filing Date		2004-04-21	
First Named Inventor	Gorenstein		
Art Unit		1639	
Examiner Name	Steek	ele, Amber D.	
Attorney Docket Number		L/TMR-1022	

	30	RAVEH, S., "Peptidic Determinants and Structural Model of Human NDP kinase B Bound in Single-Stranded DNA," Biochemistry (2001), 40 5692-5693				
	31	SAZANI, et al., "Nuclear Antisense Effects of Neutral Anionic and Cationic Oligonucleotide Analogs," Nucleic Acids Research (2001), 29:3965-3974				
	32	SEMIZAROV, D., et al., PNAS, 100(11), 6347-52 (2003) - Specificity of short interfering RNA determined through gene expression signatures.				
	33	SONG, E., et al., Nat Med, 9, 347-351 (2003) – RNA interference targeting Fas protects mice from furnisant hepatitis.				
	34	SONG, E., et al., J Virol. 2003 Jul;77(13):7174-81 (2003) - Sustained small inflorfering RNA-mediated Human immunodeficiency Virus Type 1 inhibition in primary macrophages.				
	35	UEDA, TAKUYA, et al. (1991) Phosphorothicate-containing RNAs show mRNA activity in the prokaryotic translation systems in vitro. Nucleic Acids Research, Vol. 19, No. 3, pp. 547-552.				
	36	XIA, H.B. et al. Nat Blotech, 20, 1006-1010 (2002) – siRNA-mediated gene sitencing in vitro and in vivo.				
	37	YANG, X., et al., "Construction and Selection of Bead-Bound Combinatorial Disgrucieoside Phosphorothioate and Phosphorodthhoate Aplanner Libraries Designed for Repul PCR-Based Sequencing," Nucleic Acid Research (2002), 30:132-140				
	38	YOKOTA, T., et al. (Taira), EMBO Rep., 4(6), 602-608 (2003)—Inhibition of intracellular hepatitis C virus by synthetic and vector-derived small interfering RNAs.				
	39	ZHANG, HAIDI, et al. (2004), Single Processing Center Models for Human Dicer and Bacterial RNase IIII. Cell, Vol. 118, pp. 57-68.				
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	(Not for submission under 37 CFR 1.99)	Art Unit		1639	
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